

ABSTRACT

A device, system, kit, and method are provided for filtering relatively large volumes of whole blood to recover purified RNA for analysis. The device can include: a filter including a body having an interior, a first filter connector in communication with the interior of the body, a ribonucleic acid-capturing (RNA-capturing) membrane disposed within the interior, and an optional filter frit disposed within the interior adjacent the RNA-capturing membrane. The system can include a vacuum adapter plate including a substrate having a first surface, a second surface, and one or more through-holes each extending at least from the first surface to the second surface. The first filter connector can connect to a respective through-hole to form a fluid communication between the filter and the vacuum adapter plate. The system can include a collection vessel in fluid communication with the filter.